

**Name:**

**Statistics**

**Date:**

**Practice Quiz 6-B**

1. In an Associated Press-NORC Research Center poll of 1163 American adults last fall, 21% said they felt the country was headed in the right direction.

a) Is  $\hat{p}$  known in this situation? If so, state the value of  $\hat{p}$ . If not, state the best estimate of  $\hat{p}$ , and explain why the exact value is unknown.

*$\hat{p}$  represents a proportion of the sample.*

b) Is  $p$  known in this situation? If so, state the value of  $p$ . If not, state the best estimate of  $p$ , and explain why the exact value is unknown.

*$p$  represents a proportion of the population.*

c) Calculate the margin of error.

*Use the  $E$  formula for proportions.*

d) Write the confidence interval in probability notation.

*The probability of  $p$  being in a certain range is equal to the area of the confidence interval.*

e) Precisely complete the following statement: They are 95% confident that...

*Make a claim about the population proportion.*

2. A polling company reports a confidence interval of  $21\% < p < 27\%$ . State the following values.

a)  $c$

b)  $\hat{p}$

c)  $\hat{q}$

d)  $E$